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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,811	03/04/2005	Shridhar Mubaraq Mishra	1890-0206	5796
50255 7590 10/31/2007 MAGINOT, MOOR & BECK 111 MONUMENT CIRCLE, SUITE 3000 BANK ONE CENTER/TOWER INDIANAPOLIS, IN 46204			EXAMINER RUTKOWSKI, JEFFREY M	
			ART UNIT 2619	PAPER NUMBER
			MAIL DATE 10/31/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/526,811	Applicant(s) MISHRA ET AL.	
	Examiner Jeffrey M. Rutkowski	Art Unit 2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS; WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>06/13/2005</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: the specification recites the use of “command data packets” transferred between switches. The specification has not indicated as to whether or not the switches are capable of operating at Layer 3 of the Open Systems Interconnect (OSI) model. It appears the switches described in the specification are purely Layer 2 devices. Layer 2 devices are only known to transfer frames, not packets. Additionally, the tables in the specification are irreproducible.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. **Claims 5-14** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. See “command data packet” discussion above.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

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international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. **Claims 9-12** are rejected under 35 U.S.C. 102(e) as being anticipated by Egbert (US Pat 6,714,556).

6. For **claim 9**, Egbert teaches in-band management of a stacked group of switches by a single Central Processing Unit (CPU) [title]. A master CPU **46a** (master switch) receives execution command instructions from a remote manager **20**. The master CPU **46a** then uses frames to send the execution command instructions to a set remaining host processing units (slave switches) [col. 3 lines 37-46], via backbone link **48** [col. 3 lines 30-33] (employing at least one port of a master data switch of the plurality of data switches to issue command packets to slave data switches of the plurality of switches; employing at least one port of each of the slave data switches to receive the command packets). Upon reception of the frames containing execution instructions, the remaining host processing units perform the specified operation [col. 4 line 28] (recognizing within the slave data switches the command packets and implementing commands specified in the command packets).

7. For **claim 10**, which depends from **claim 9**, Egbert teaches Media Access Control (MAC) addresses are used determine whether or not a particular host processing unit is the intended destination of a command frame [col. 4 lines 12-25] (wherein the recognizing step further comprises determining at a first slave data switch whether a command packet transmitted to the first slave data switch is intended to cause a command within the command packet to be carried out at the first slave data switch).

8. For **claim 11**, which depends from **claim 10**, the teachings of Egbert from the rejections of **claims 9 and 10** disclose when the proper host processing unit receives a command frame, the

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specified operation is performed (further comprising implementing the command at the first slave data switch if the first slave data switch determines that the command packet is intended to cause the command to be carried out at the first slave data switch).

9. For **claim 12**, which depends from **claim 11**, Egbert teaches command frames are forwarded to the proper host processing unit matching the MAC address in the command frame via forwarding among host processing units [col. 4 lines 15-20] (further comprising passing the command from the first slave data switch to a second slave data switch if the first slave data switch determines that the command packet is not intended to cause the command to be carried out at the first slave data switch).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. **Claims 5-8, 13-14 and 15-16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Egbert in view of Sylvest et al. (US Pat 6,954,437), hereinafter referred to as Sylvest.

13. For **claim 5**, Egbert teaches a network of multiport switches [**col. 3 lines 15-35 and figure 2**]. Each switch in the network is identified by a MAC address [**see claim 10**] (data switches, each data switch having a plurality of ports adapted for receiving and transmitting packets and arranged for transferring data packets internally between the ports of the data switches according to address information in the packets). The teachings of Egbert from the rejection of **claim 9** discloses the use of a master switch, slave switches and command frames (the network of data switches including a master switch and other data switches, the master switch configured to issue commands to the other data switches, the commands in the form of control data packets, the other data switches comprising slave data switches configured to recognize the control data packets and to operate based on the commands contained within the control data packets). Egbert does not teach the switches are connected in pairs. Sylvest teaches the switch pair interconnect limitation absent from the teachings of Egbert by disclosing a stack of switches connected in a pair wise fashion [**figure 1**] (the data switches being connected as an array, the array formed by connections between ports of pairs of the switches).

14. It would have been obvious to a person of ordinary skill in the art at the time of the invention to interconnect pairs of switches in Egbert's invention to allow for a simple intra-connect physical layout.

15. For **claims 6, 13 and 15**, which depend from **claims 5, 12 and 9 respectively**, Egbert teaches the use of master switch [**see claim 1**]. Egbert does not teach a master determines the topology of a network. Sylvest teaches the topology limitation absent from the teachings of

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Egbert by disclosing a master switch accesses adjacencies in a distributed dictionary. The adjacencies are used by a graph-theory algorithm to create the network topology [col. 8 lines 54-57] (claim 13: determining at the master data switch a topology of the network of data switches; claim 15: determining, under the control of the master data switch, a topology of the network of data switches).

16. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use a master switch to create a network topology in Egbert's invention to determine the shortest paths in a network.

17. For **claim 7**, which depends from **claim 5**, the teachings of Egbert from the rejections of **claims 9 and 10** disclose when the proper host processing unit receives a command frame, the specified operation is performed (wherein each slave data switch is further configured implement a command within a control data packet if the slave data switch determines that the control data packet is intended to cause the command to be carried out at the slave data switch).

18. For **claim 8**, which depends from **claim 7**, Egbert teaches command frames are forwarded to the proper host processing unit matching the MAC address in the command frame via forwarding among host processing units [col. 4 lines 15-20] (wherein a first slave data switch is further operable to pass a control data packet from the first slave data switch to a second slave data switch if the first slave data switch determines that the control data packet is not intended to cause the command to be carried out at the first slave data switch).

19. For **claims 14 and 16**, which depend from **claims 13 and 15 respectively**, Egbert teaches host processing units in the network are identified by MAC address [see **claim 10**] (further

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comprising assigning IDs to the slave data switches, said IDs included in subsequent packets passing between the switches within the network of data switches).

Conclusion

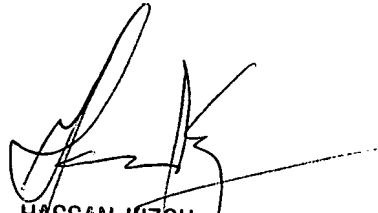
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey M. Rutkowski whose telephone number is (571) 270-1215. The examiner can normally be reached on Monday - Friday 7:30-5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jeffrey M Rutkowski
Patent Examiner
10/23/2007

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